DRAFT

Answers to Health Department Check List Questions

1 Natural U_3O_8 and ThO_2 (source material).

2 Form

The ores will be processed in an electric arc furnace where the material will be heated until it becomes molten. At this time reducing agent will be added to reduce the columbium oxide to a metallic A slag metal separation is made and the molten slag is poured into 20 cubic foot cast iron pots and allowed to solidify The solid slag is then dumped and is ready for disposal

The slag is a mixture of chemical compounds in a solid state similar to rock formations ranging in size from 2,000 lbs. by down pieces. The Thorium or Uranium oxides will be dispersed through the pieces of slag

Analysis of 250 NT Uranium Bearing Slag presently stored at plant site

U_3O_8	.25%
Cb_2O_5	2.00
Ta_2O_5	.70
TiO_2	2.30
ZrO_2	1.00
Al_2O_3	50.00
CaO	25.00
MgO	14.25
Other rare earth oxides	3.50

Analysis of material to be generated 50,000 lbs. for test purposes and 100,000 lbs. to be generated per month, if successful.

ThO_2	1.25%
Cb_2O_5	1.00
Zr_2O_3	1.00
MgO	15.00
Al_2O_3	55.00
CaO	27.50

3 No salts will be added Lime and alumina will be added to the ore and columbium removed

4 None

5 Quantity to be disposed of --

1. Immediately - 250 NT slag containing .25% U_3O_8 or 1250 lbs. U_3O_8.

2. Shortly after license received 50,000 lbs: slag containing 1 25% ThO_2 or 625 lbs. ThO_2.

3. If tests prove successful, we will be producing 100,000 lbs per month of slag containing 1.25% ThO_2 or 1250 lbs ThO_2.

6. See Drawing S-8685-A.

7. 540' x 1500' or 810,000 sq. ft.

8. The area at one time was a swamp and has been filled with slag to ground level of surrounding area. Elv. approx. 570

9. The soil underneath is clay with rock approximately 12 ft. below surface.

10. We would propose to dig the pit to a depth of 10 ft. below ground level.

11. ?

12. ?

13 We propose to cover with 4 ft of fill.

14. The area is fenced in and posted and patroled each shift.

15. We propose to mark the area with signs warning that radioactive material is buried in this area.

16. The area is fenced in, however, no other special precautions are planned to exclude rodents or animals.

17. Over one mile to nearest public water supply.

18. Not sure, however, must be more than one-half mile.

19. 3600 ft. to Tuscarora Creek, adjacent to Pikes Creek which empties to city sewer, over mile to Niagara River.

20. Immediate area is devoid of edible plant life.

21. Nearest habitation approximately 1500 ft.

22. We propose to keep our regular run records and disposal records in our main office files where they would be available for inspection at any time. We would also propose a retention time of 30 years on these files. In addition, we would keep the Niagara County Health Department informed by letter monthly of the amount and location and content of slag disposed of.

23 The slag would be monitored by a plant radiation officer, Hugh O'Hear, using a Ray-O-Tec portable survey meter. Presently this is done every six months on the slag we have stored in the yard.

24 Our plant radiation officer would be available for emergency monitoring

25. Does not apply

26. Land is owned by Union Carbide Corporation.

27. Slag would be transported by company truck over private roads to burial grounds.

28. --